

	Geologic age and description	Origin	Distribution	Water-bearing properties
	Recent beach sands	Deposited by ocean currents	Thick deposits present only at Hampton	May yield a little water to shallow wells
	The Columbia group consists of Pleistocene clays and sands that make up the surficial terraces. Marly strata are present in easternmost terraces only. The average thickness is about 30 feet and the maximum thickness is probably not greater than 60 feet	The higher westerly terraces are of continental origin, but the lower easterly terraces are of marine origin	Exposed at the surface throughout the area	Excellent water-bearing formation for domestic and small industrial supplies
	The Chesapeake group of Miocene age consists mainly of shell marl, dark-blue or gray clay, and subordinate sandy strata. The Yorktown formation is sandy and very fossiliferous. The St. Marys formation consists largely of tough blue or gray clay beds. The basal Calvert formation is diatomaceous and sandy but is less fossiliferous than the Yorktown formation. The Chesapeake group is about 600 feet thick at Fort Monroe	Deposited in marine waters but may have extended inland some distance west of the present Fall Line	Exposed in stream beds except at Hampton and lower Warwick, where it is concealed by younger sediments. The Yorktown and St. Marys formations crop out throughout the central and western area and the Calvert formation crops out along the Fall Line	Yorktown formation yields small quantities of hard water to wells. St. Marys formation is not water-bearing. Calvert formation yields small to moderate supplies of water in many places. At Yorktown and in the lower peninsula area the water may be somewhat brackish
	Chickahominy formation of upper Eocene (Jackson) age is 80 feet thick at Yorktown. Consists of gray marl beds containing subordinate glauconite and pyrite. Highly foraminiferal	Deposited in marine waters	Known from well cuttings at Yorktown, Camp Peary, Jamestown, Fort Eustis, Newport News, and Fort Monroe. Thins to a vanishing point before approaching the Fall Line	Not a water-bearing formation at Yorktown. Some thin water-bearing sand beds in central part of the peninsula are probably Chickahominy formation
	Nanjemoy formation of lower and middle Eocene age. Consists of gray marl, glauconite and quartz sand, and thin limestone beds. Underlain by the pink Marlboro clay member stratum near the Fall Line	Deposited in marine waters	Typical exposure from the Fall Line to Williamsburg, but may be thinner or absent east of Williamsburg. Lower Eocene part of the formation thins to a vanishing point about 20 miles east of the Fall Line. Middle Eocene part may be quite thin in vicinity of Newport News	Yields ample water for domestic supplies along the lower Chickahominy River and at the head of the York River. Water for industrial use is pumped at West Point
	Aquia formation of lower Eocene age. Consists of glauconitic marl and basal quartz sand beds. Maximum thickness is about 125 feet	Deposited in marine waters	Occurs along the Fall Line. Formation is exposed at the surface near Richmond. No unconformity with underlying Mattaponi formation	Basal sands yield moderate supplies of water to wells in Hanover, Henrico, and western King William Counties
	Mattaponi formation of Late Cretaceous and Paleocene age. Consists of mottled clay, glauconitic sand and marl, and thick basal quartz sand. Foraminifera in upper part. About 300 feet thick at West Point and probably 2 feet thick at Newport News	Deposited in estuaries and bays	Occurs at depth in central and eastern parts of the Coastal Plain as far west as the Fall Line	A prolific water-bearing formation tapped by many domestic and a few industrial wells, notable at West Point and Newport News. The formation constitutes a vast reserve of fresh water in the central Coastal Plain. East of Williamsburg, the formation yields brackish water
	Potomac group of Lower and Upper Cretaceous sand and clay beds. Maximum thickness is about 1,000 feet at Fort Monroe	Deltaic sediments deposited in fresh to slightly brackish waters	The formation crops out in the vicinity of Richmond but lies beyond the reach of most wells a short distance east of the Fall Line (See plate 1)	The formation yields water to a few wells near the Fall Line but elsewhere it is not yet reached by wells
	Newark group of sandstones and diabase sills of Triassic age	Continental deposits and volcanic intrusive rocks and minor flows	Sandstones crop out north of Ashland and are found in wells at Ashland and Doswell	Yields small to moderate supplies of water to wells
	Granite, possibly as young as late Paleozoic age	Igneous intrusive rocks	Crops out along the Fall Line except where Triassic units are present. Underlies entire Coastal Plain	Yields small to moderate supplies of water to wells along or near the Fall Line

COLUMNAR SECTION WITH DESCRIPTION OF THE GEOLOGIC FORMATIONS FOUND IN THE YORK-JAMES PENINSULA, VIRGINIA

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